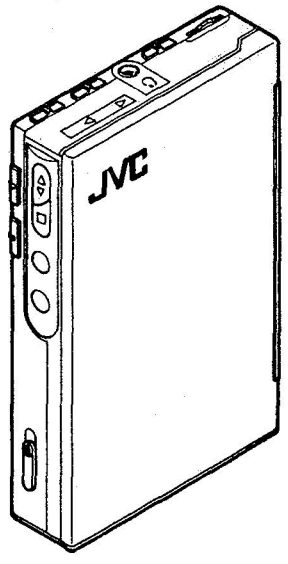
JVC

SERVICE MANUAL

STEREO CASSETTE PLAYER

CX-9 A/B/C/E/G/J/U1/U2



Area suffix	
A	Australia
B	U.K.
C	Canada
E	Continental Europe
G	W. Germany
J	U.S.A.
U1	Other Areas (AC 120V)
U2	Other Areas (AC 220V)

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No. 1745
May. 1988

1 Specifications

Type : Stereo cassette player
Track system : 4-track 2-channel stereo
Fast wind time : Approx. 150 sec. (C-60)
Frequency response: 20—16,000 Hz (with metal tape)
(with HYPER-BASS "ON")
20—14,000 Hz (with normal tape)
Output terminals : Headphones (Stereo mini plug ϕ3.5)
Matching impedance 16 Ω — 1 kΩ
Power output : 9 mW (4.5 mW + 4.5 mW) at 10% THD/20 Ω
Duration of battery: When using a fully charged rechargeable battery (BN-R4); approx. 3 hours
When using an ordinary battery in parallel with rechargeable battery (BN-R4); approx. 8.5 hours
When using an alkaline battery in parallel with rechargeable battery (BN-R4); approx. 12 hours
Power requirement : DC 1.5 V (ordinary battery x 1, size R6)
DC 1.2 V (rechargeable battery [BN-R4] x 1)
Dimensions : 71.5(W) x 107.5(H) x 22(D) mm
(excluding buttons and controls)
Weight : Approx. 167 g (without battery)
Approx. 190 g (with rechargeable battery)
Accessories provided : Charger (AC-R15B/E) x 1
Rechargeable battery (BN-R4) x 1
Headphone x 1
Carrying case x 1

CHARGER AC-R15B/E

Input power source: AC 240 V, 50/60 Hz (AC-R15B) (B version)
AC 220 V, 50/60 Hz (AC-R15E) (E/G version)
AC 240 V, 50/60 Hz (AC-R15A) (A version)
AC 120 V, 60 Hz (AC-R15J) (J version)
AC 120 V, 60 Hz (AC-R15C) (C version)
AC 120 V, 50/60 Hz (AC-R15U1) (U1 version)
AC 220 V, 50/60 Hz (AC-R15U2) (U2 version)
Output voltage : DC 1.5 V, 250 mA

RECHARGEABLE BATTERY BN-R4
(use the AC-R15B/E charger exclusively)

Type : Ni-Cd rechargeable battery
Recharge time : Approx. 2 hours
(approx. 90% of full charge)
Battery life : Repeat recharging approx. 500 times
Output voltage : DC 1.2 V

Design and specifications are subject to change without notice.

2 Location of Controls

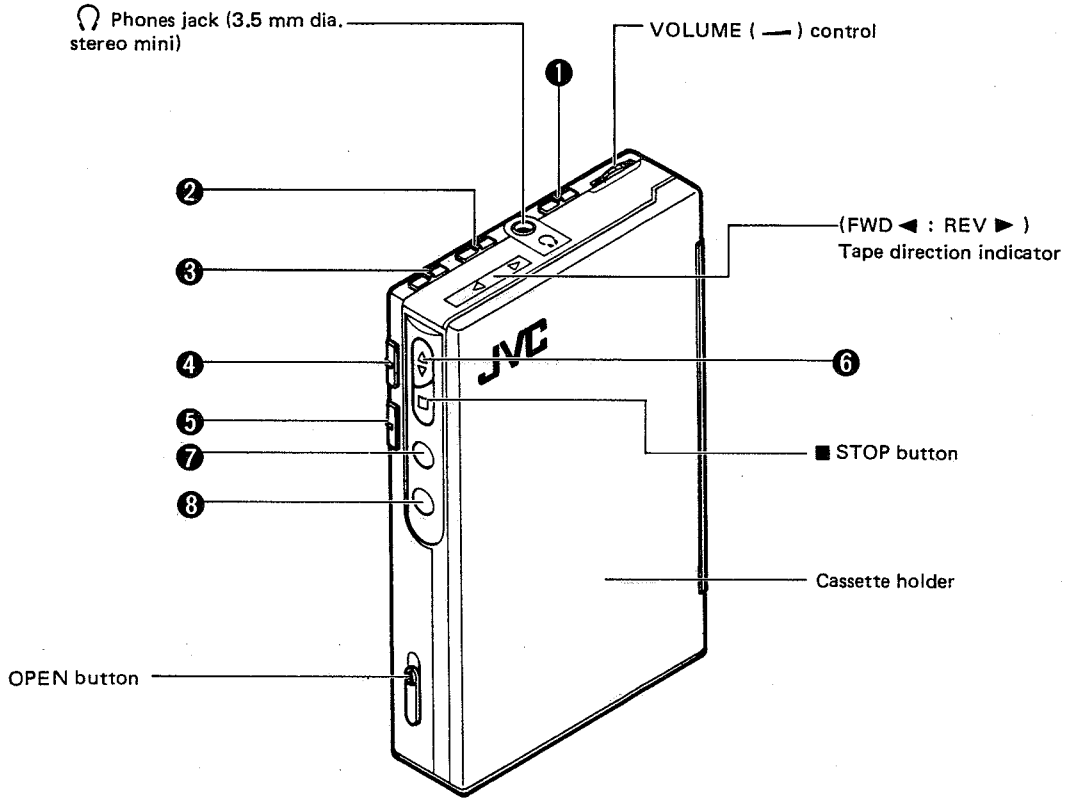

Phones jack (3.5 mm dia. stereo mini)
VOLUME (—) control
(FWD ◄ : REV ►)
Tape direction indicator
■ STOP button
Cassette holder
OPEN button

Fig. 2-1

❶ **HYPER-BASS switch**
Set to ON to play back with hyper-bass sound.

❷ **TAPE switch**
Set according to the tape to be used.
METAL/CrO_2 : Set to this position when using metal (Type IV) or CrO_2 (Type II) tape.
NORMAL : Set to this position when using normal (Type I) tape.

❸ **DOLBY NR switch**
Set to ON when listening to a tape recorded with Dolby NR.
* Dolby noise reduction system manufactured under license from Dolby Licensing Corporation.
* "Dolby" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

❹ **LOCK/OPE (operation) switch**
Normally set to the OPE (operation) position. When set to LOCK, the mode presently engaged is maintained and cannot be changed even when operation button is pressed. However, auto-stop and reverse operations are performed at the end of the tape regardless of the switch position. The "PLAY" and "STOP" operation of the remote control can be performed regardless of the switch position.

❺ **REVERSE MODE switch**
⟲ : Set to this position for continous playback and FF/REW auto play.
⇄ : Set to this position for one-side playback.

❻ **◄►play/direction button**
Press to listen to a cassette. Press again to play in the reverse direction. Each time this button is pressed, the tape direction is reversed.

❼ **FF button**
Press to fast wind the tape.

❽ **REW button**
Press to fast rewind the tape.

Base side

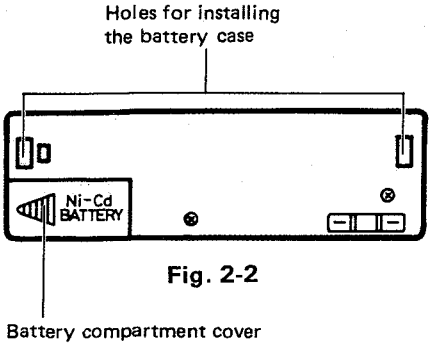


Fig. 2-2

Headphone (remote control unit)

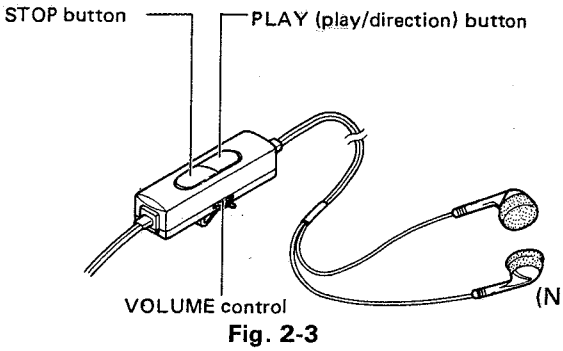


Fig. 2-3

3 Connection of Power Supply (Battery)

POWER SUPPLY

A. OPERATION ON RECHARGEABLE BATTERY

The rechargeable battery provided is not charged when shipped.
Charge the battery before use.

*** RECHARGING**

① Insert the negative ⊖ end of the rechargeable battery first.

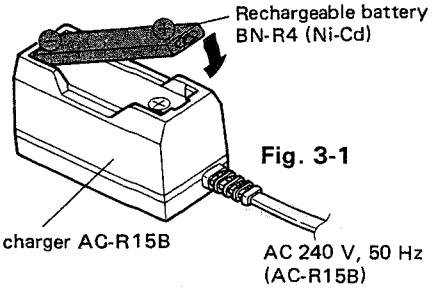
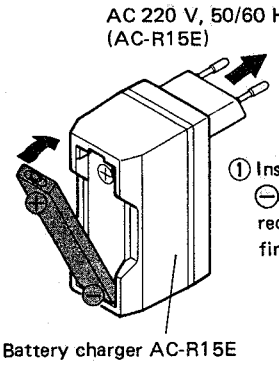


Fig. 3-1

② Plug into a household wall outlet.



② Plug into a household wall outlet. (AC 120 V, 60 Hz)

① Insert the negative ⊖ end of the rechargeable battery first.

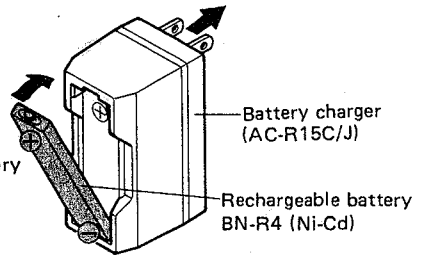


Fig. 3-2

● To remove the rechargeable battery, lift the positive ⊕ end.

● LOADING THE RECHARGEABLE BATTERY

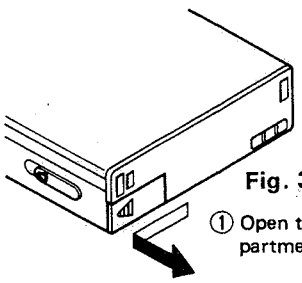


Fig. 3-3

① Open the battery compartment cover.

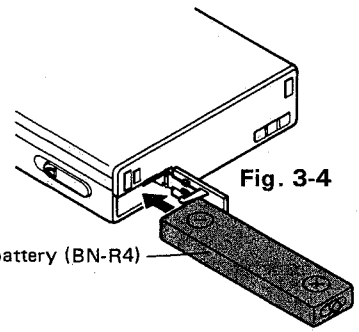


Fig. 3-4

② Insert the rechargeable battery (Ni-Cd).

③ Close the cover.

Insert the negative ⊖ end of the rechargeable battery first.

B. OPERATION ON ORDINARY BATTERIES

① Insert R6 (AA) size battery into the battery case.

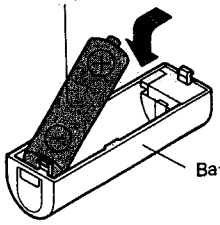


Fig. 3-5

② Attach to the base of the main unit.

Set the claws in the holes.

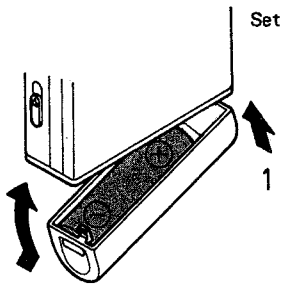
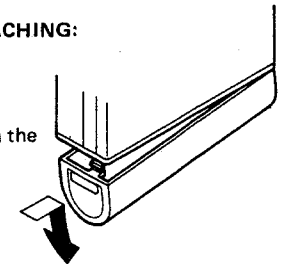


Fig. 3-6

DETACHING:

Detaching by pushing in the direction of the arrow.



When using an ordinary battery it can be connected in parallel with the rechargeable battery.

4 Continuity Test at Overhaul

■ **When P.C. Board is removed:**

1. The EJECT switch (Door Open/Close switch) S703 is in the OPEN state. As the cover is removed, shortcircuit the switch from backside of the board in order to make the reset circuit inoperative.
2. Auto stop inhibit
   When the P.C. board is removed, the auto stop circuit is in operation to stop all the mechanism operation. Make the auto stop circuit ineffectual by shortcircuiting.
3. Repair terminal
   If an operation switch is pressed as the board is removed, the mechanism cam lever (contact switch actuating lever) moves to the limit and this makes reassembling troublesome. For easy reassembling work, shortcircuit the terminal before removing the board so that the lever remains at the Stop position.

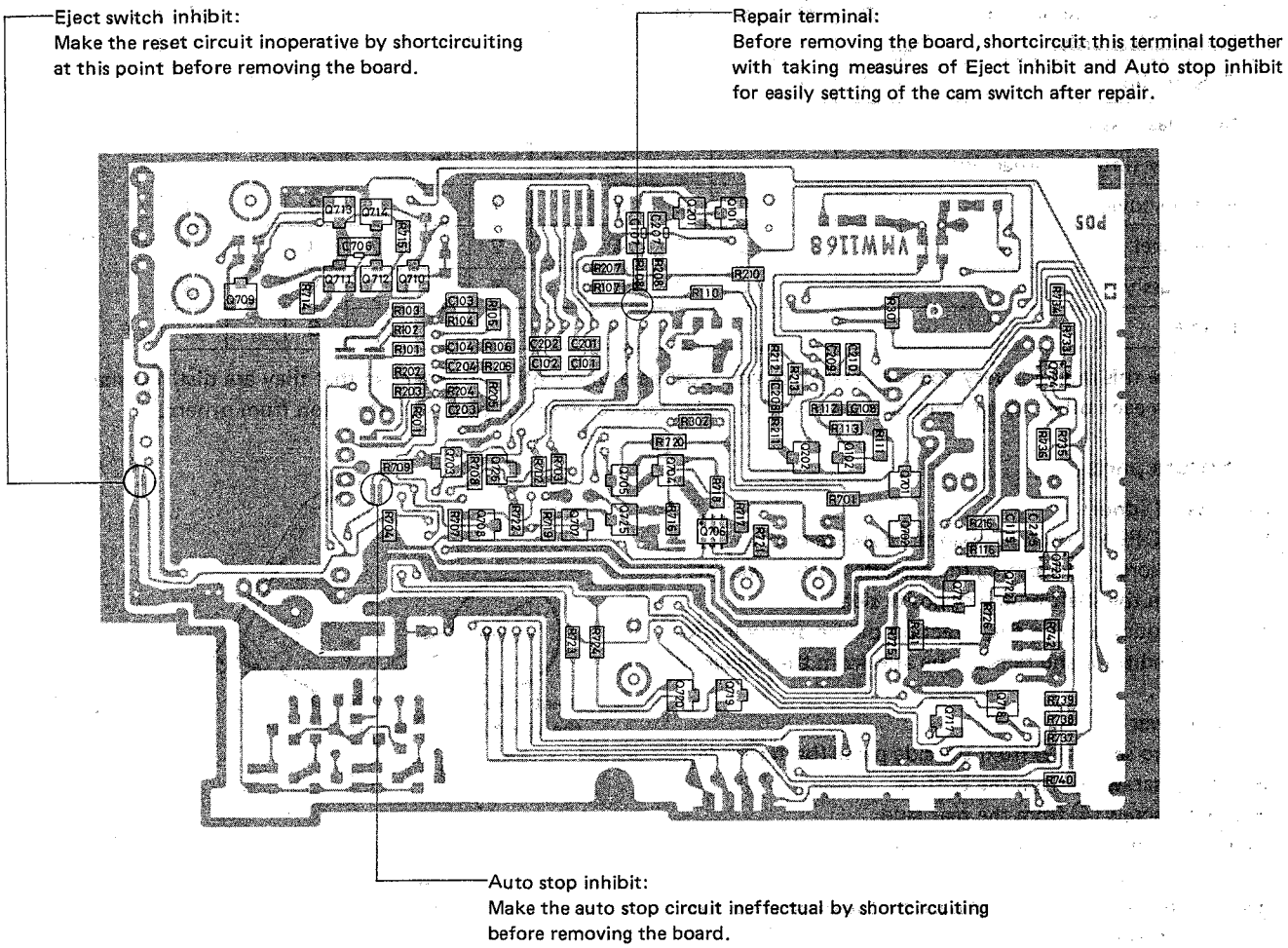

Eject switch inhibit:
Make the reset circuit inoperative by shortcircuiting at this point before removing the board.
Repair terminal:
Before removing the board, shortcircuit this terminal together with taking measures of Eject inhibit and Auto stop inhibit for easily setting of the cam switch after repair.
Auto stop inhibit:
Make the auto stop circuit ineffectual by shortcircuiting before removing the board.

Fig. 4-1

4. When the mechanism is removed, position the FWD/REV slide switch manually.
5. In the state that the set is disassembled, press an operation button with a slender round stick having a flat end.

5 Removal of Main Parts

■ **Removal procedure of main parts**

For easy removal of objective parts, remove other parts listed in the table in numerical order.

Other parts to be removed in numerical order \ Subject for repair	Head	Pinch roller	Board ass'y	Capstan motor	Actuator motor	Disc ass'y	Main belt	Inner lay	Side panel	Frame	Main base ass'y (Head)	Contact (cam) switch
Cassette lid	1	1		1	1	1		1		1	1	
Main base ass'y		2									2	
Inner lay (interior ornament)					2	2		2		2		
Bottom cover	2		1	2	3		1		1	3		1
Side panel			2	3	4		2		2	4		2
Board ass'y			3	4	5		3			5		3
Frame										6		

Note: Since this model is very compact and thin, pay most careful attention to screws so that they are distinguishable from each other. It is recommended to use adhesive tape to attach or place in distinction from others.

● Enclosure parts

■ **Cassette lid (door)**

1) Slide the "OPEN" knob to open the cassette door.
2) Remove a screw ① securing the cassette lid and take off the lid from the shaft on the opposite side.
3) Move the door arm in the direction of the arrow mark (closed condition) and remove the arm from the holder.

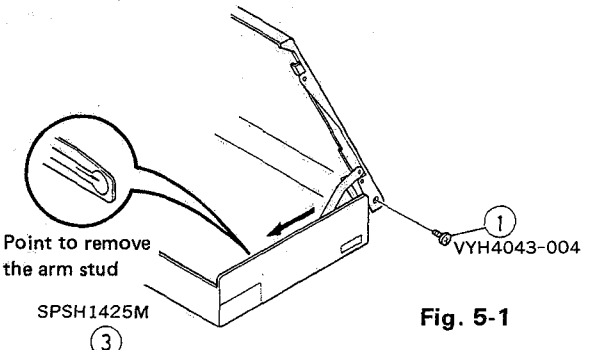


Fig. 5-1

■ **Bottom cover**

1) Remove two screws ② from the side panel (battery side).
2) Remove a screw ③ from the bottom.
3) Remove a screw ④ from the rear side.
4) Remove a screw ⑤ near the door knob (door "OPEN" knob).
5) Extend the bottom cover outward by the door knob section to remove it.
   Separate the bottom cover at the point Ⓐ first, and then push it in the direction of Ⓑ for removal.

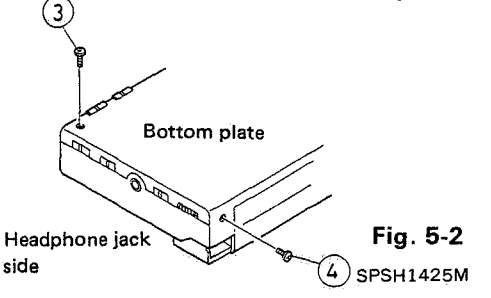
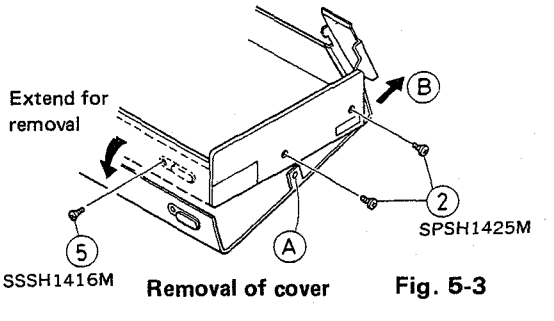


Fig. 5-2

- In this state, the head can be replaced.
- When reassembling the Eject knob which was once removed, set the knob shaft to the hole and confirm that it opens and closes smoothly.



Removal of cover

Fig. 5-3

● **Caution to reassemble:**

1) Correctly set the relative positions of knobs on the bottom plate and switch levers on the board.
2) For fixing the set with the cover, insert the part of Ⓑ between the side panel and chassis and proceed further in the reverse order of disassembly.

■ **Side panel**

1) Remove a screw ⑥ fixing the side panel to the chassis.
2) Remove a screw ⑦ securing the battery cover contact ass'y.

■ **Board ass'y**

1) Remove two screws ⑧ fixing the board.
2) Remove a screw ⑨ securing the battery holder ass'y.
3) Remove a screw ⑩ fixing the frame.
4) Release the motor wires from arrangement.
5) Extend the frame outward (in the direction of the black arrow ➡) by the section of operation buttons, and moving the board in the direction of the white arrow (⇨) raise it to disenage the jack from the frame. Then lift the board upward by the operation buttons section.

Notes:

a) When extending the frame outward, do it as little as possible (extension enough to separate the switch ass'y). Too much extension causes damage of the frame.
b) Do not remove the FWD/REV switch contact without due cause. (For reassembly of the switch, refer to the illustration of exploded view.)

● **Checkup points at reassembly:**

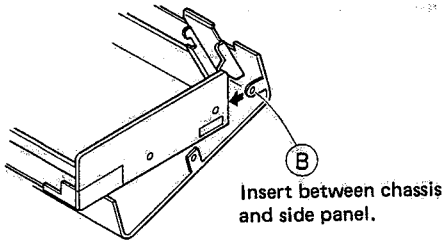
1) Correct engagement of the FWD/REV slide switch and the lever.
2) Correct arrangement of wires. No slack or contact to parts.
3) Every stud is correctly positioned in the hole of the operation button.
4) **After reassembly, the switch lever is positioned on the leaf switch. To set it to the right position, push the switch from the board side so that the switch lever is positioned on this side of the switch.**
After the setting, confirm operation (ON/OFF work) lever is positions on this side of the switch.
After the setting, comfirm operation (ON/OFF work) of the leaf switch (S703) (cassette tape detection switch) by observing through a hole of the board.

■ **Contact switch (cam switch)**

By unscrewing two screws from the board, the switch can be taken off. For reassembling procedure, refer to the illustration of the exploded view.
At the removal, pay attention to the contact terminal not to bend it.

■ **Frame**

Remove the screw securing the frame at the headphone jack section to take off the frame. (For making the work easy, it is recommended to remove the inner lay [interior ornament] prior to the above procedure.)



Reassembly of cover **Fig. 5-4**

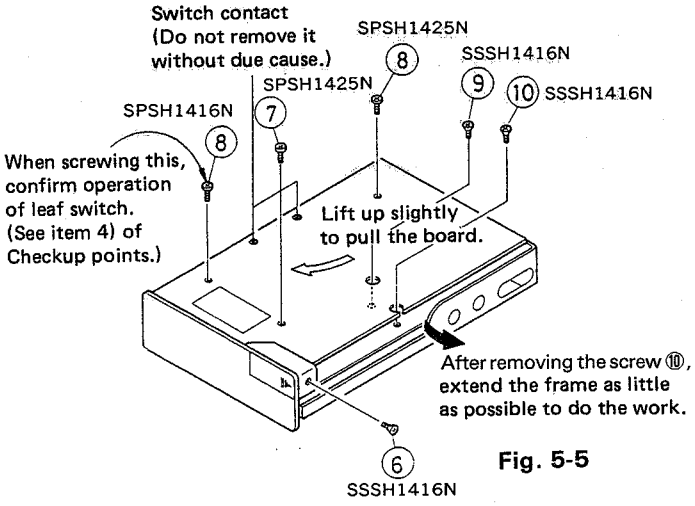


Fig. 5-5

• Mechanism parts

■ Head ass'y (with flexible board)

1) Take off the cassette lid and bottom cover from the set.
2) Remove the head flexible board from the main board.
3) Remove two screws (22) securing the head. For detail of assembly parts, refer to the illustration of the exploded view.

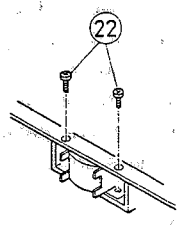


Fig. 5-6

■ Pinch roller ass'y

1) Remove the cassette lid.
2) To remove the main base ass'y unscrew two screws (20) securing the base holders. (Take note of difference between the two base holders.)
3) After taking off the main base, remove the C-washer (21) securing the pinch roller ass'y.
4) Remove the pinch roller ass'y from the main base.

- **How to engage springs**

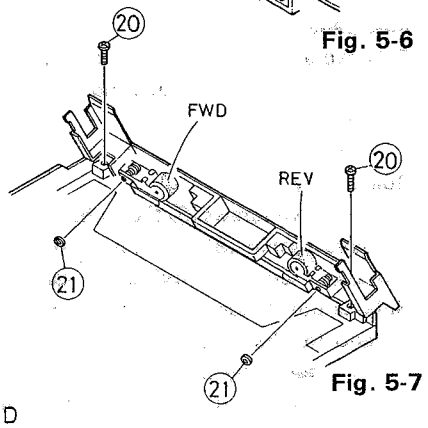


Fig. 5-7

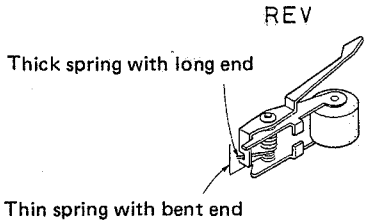


Fig. 5-8

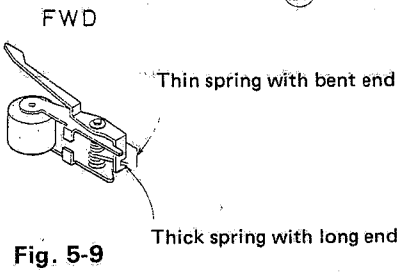


Fig. 5-9

■ Disk ass'y

1) Remove five screws (24) fixing the inner lay (interior ornament).
2) Remove the washer (23) at the point of the disk ass'y.

■ Capstan motor

1) Remove the P.C. board.
2) Disconnect wiring to the motor on the board.
3) Disengage the main belt and remove two screws (25) securing the motor.

Notes: • For detail of wiring, see the circuit board diagram.
• To engage the main belt, refer to the illustration of the exploded view.

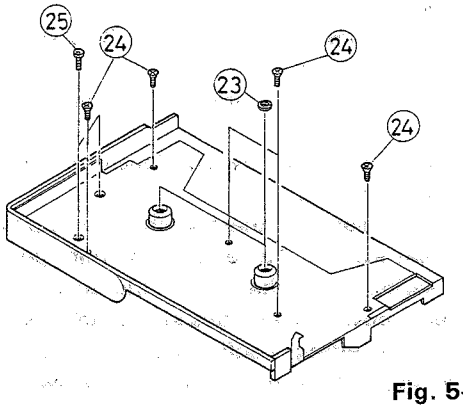


Fig. 5-10

■ Actuator motor

1) Remove a screw (26) fixing the actuator motor.
2) Remove the spring shown in the figure.
3) Move the actuator motor in the direction of arrow mark to remove it.
   - Lift the actuator motor by the calking part.
   - To slide the actuator motor, lift it up for the thickness of the chassis.
   - The motor assembly becomes free from the chassis when the shafts for the three gear shafts are moved nearly the big hole. At this time, pay attention to the gears which will be disengaged at the same time.
   - The switch arm becomes free from engagement, too.
4) Remove the motor from the holder.

Note: For setting of gears, refer to the illustration of the exploded view.

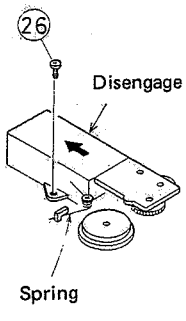
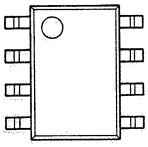


Fig. 5-11

6 Integleted Circuit Diagram

AN6653S
IC703 GOVERNOR



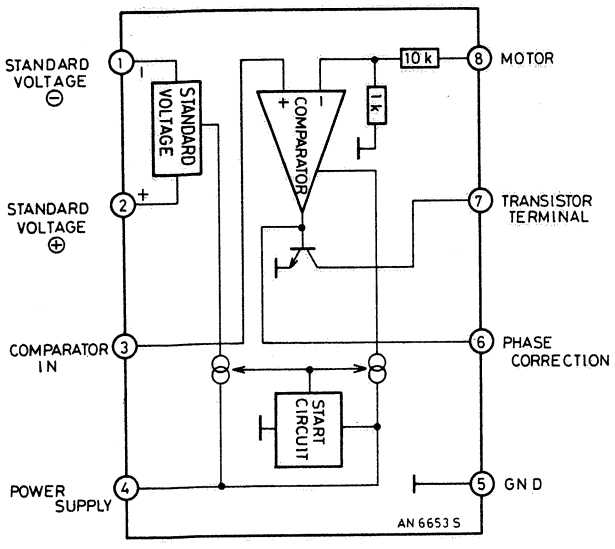
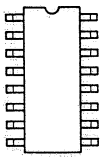


Fig. 6-1

TA7793F
IC302 DOLBY NR



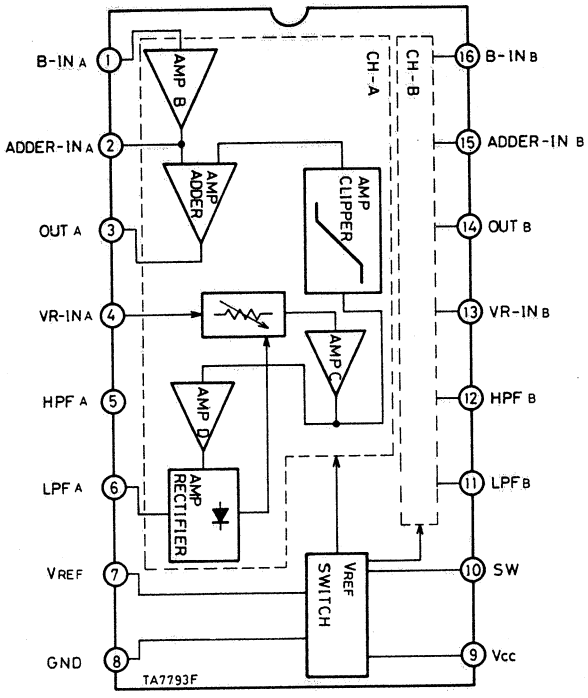
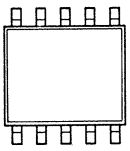


Fig. 6-2

LA4535M
IC303 POWER AMP.



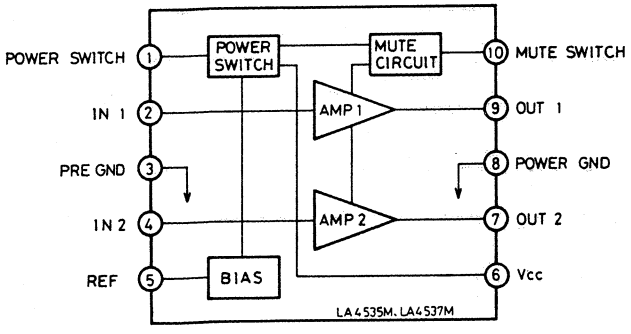
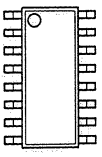


Fig. 6-3

BA3413F
IC301 PRE AMP.



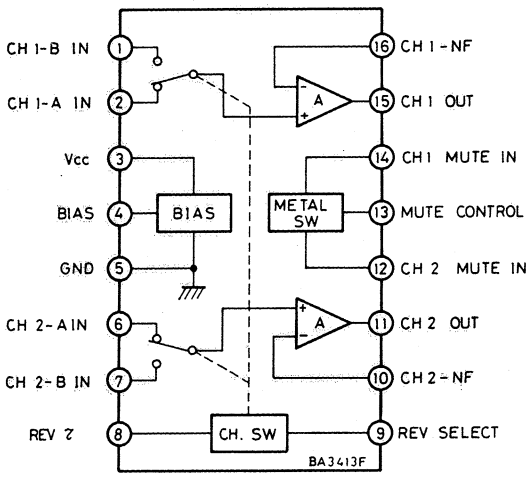


Fig. 6-4

7 Main Adjustments

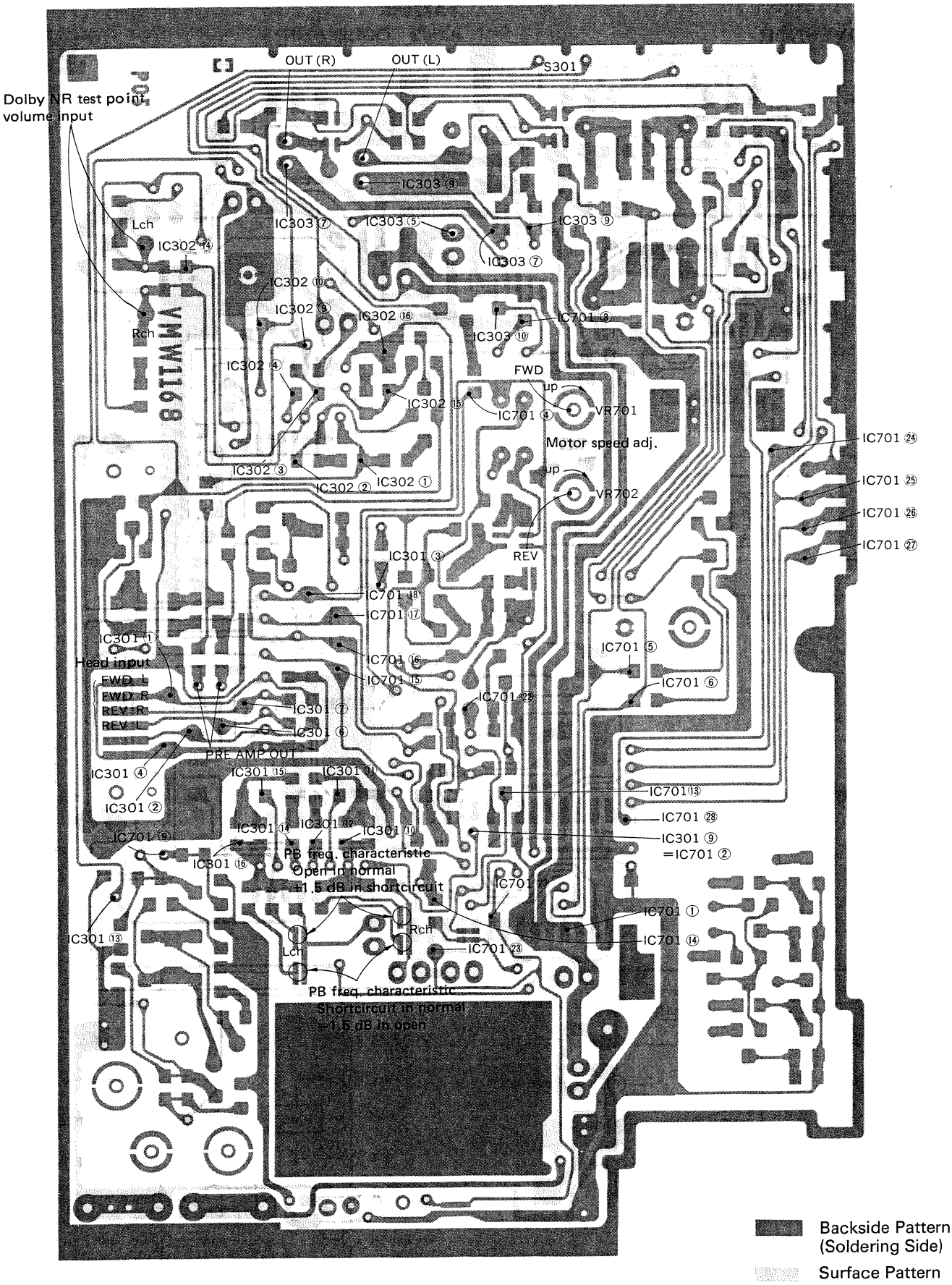


Fig. 7-1

• Electrical adjustment

■ Conditions

Power supply : DC 1.2 V
Output : −10 dBm/20 Ω at headphone terminal

Dolby NR switch : OFF
H BS switch : OFF
Tape select switch : NORMAL

Item	Tape to be used	Adjustment/checkup procedure	Select switch position	Adjustment points
1. Head azimuth adjustment	Test tape VTT702 (8 kHz)	Play back the test tape in FWD and REV modes and adjust the azimuth adjusting screw to the mid-point of both peak levels. (Apply screw sealant after adjustment.)	TAPE 120 μs	Azimuth adjusting screw
2. Tape speed adjustment & Wow/flutter checkup	Test tape VTT712 (3 kHz)	Playing back the test tape, adjust VR701 and VR702 so that a frequency counter reads 3030 ± 10 Hz in +6 Play mode. Wow & flutter: 0.54% (JIS RMS)	TAPE	VR701, VR702 on Main board
3. Playback sensitivity adjustment	Test tape VTT724 (1 kHz)	In FWD and PLAY modes, adjust output at PB GAIN TP so as to be −32.5 dB ± 1 dB for either of L and R channels. (see Main circuit board diagram.)	TAPE 120 μs	For level adjustment shortcircuit or open circuit the adjusting point.
4. Playback frequency characteristic checkup	Test tape VTT736	Output deviation against 1 kHz: (Normal tape) 125 Hz : 0 dB ± 3 dB 8 kHz : 0 dB ± 4 dB (Metal tape) 8 kHz : −4 dB ± 4 dB	TAPE 120 μs TAPE 70 μs	
5. Playback output checkup	Test tape VTT724	At headphone terminal: Volume at max.: −11 dB ± 3 dB, 0.25 V/20 Ω Difference between L & R ch.: within 3 dB	TAPE 120 μs	
6. Dolby effect checkup	Dolby effect measuring filter	Confirm that difference between noise levels at turning on and off NR switch is more than 8 dB. (Use a Dolby effect measuring filter.)	TAPE	

• Mechanism specifications

Item	Condition	Description	Specifications	Remark
Current consumption	1.2 V DC power supply C-60 tape used	End of PB	Less than 145 mA (with jig)	Incl. current consumption of the governor circuit
		End of FF/REW	Less than 240 mA	
		Reel lock	Less than 500 mA	
Winding torque	Torque gauge	PB	25−40 g/cm	
		FF	50 g/cm	
		REW	45 g/cm	
Back tension	Cassette or fan gauge	FF side	0.5−1.5 g/cm	
		REW side	0.5−1.5 g/cm	
Fast forward time	C-60 tape used	FF	Less than 180 sec	
		REW	Less than 180 sec	
Direction time			Operation finishes within 3 sec after Direction button is pressed.	

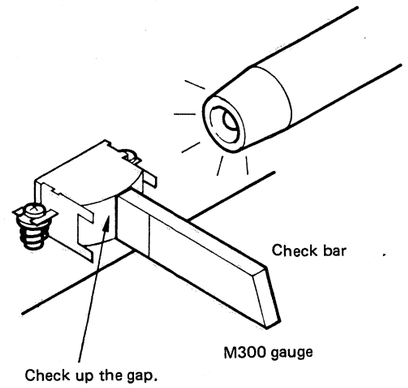
1. Head azimuth and head height adjustments

After replacement of the head, proceed adjustments in the following order.

1. Check up the head's tilting angle (use M300 gauge). Refer to Fig. 7-2(A).
2. Adjust the tape guide height and head height (use M300 gauge). Refer to Fig. 7-2(B).
   After checkup of the tape guide height at the right and left ends, adjust the heights of the both ends by turning the screws Ⓐ and Ⓑ.
3. Adjust head azimuth (use the alignment tape VTT-802 [8 kHz segment]).
   a) In FWD mode, adjust the azimuth screw Ⓐ to obtain the maximum output.
   b) With the tape running in REV PB mode, adjust the head height adjusting screw Ⓑ to obtain the peak level. (At this time, make sure not to turn the screw over 180°.) Take note of difference between the peak levels in FWD and REV modes, which should be within 4 dB.
   c) Forwarding the tape in FWD mode again, adjust the azimuth adjusting screw Ⓐ to set for the peak level.
   d) Repeat the step b) to confirm the peak level again.
   e) Apply screw sealant to the screws Ⓐ and Ⓑ.
4. In the step 3-b) above, if the level difference exceeds 4 dB, perform the following adjustment.
   a) In REV mode, turn the head height adjusting screw Ⓑ by 180° in the contrary direction to the peak.
   b) Repeat the adjustments of the step 3-c) and after.

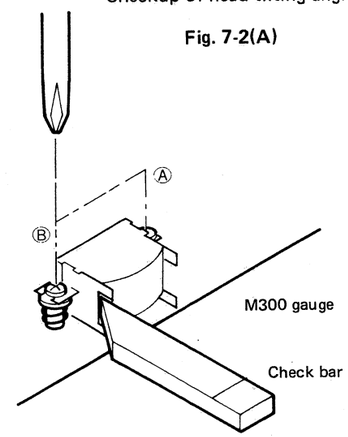
• **Final fine adjustment**

Fine adjustment can be performed by turning the screw through a hole located on the right top of the FF button on the cover.



Checkup of head tilting angle

Fig. 7-2(A)

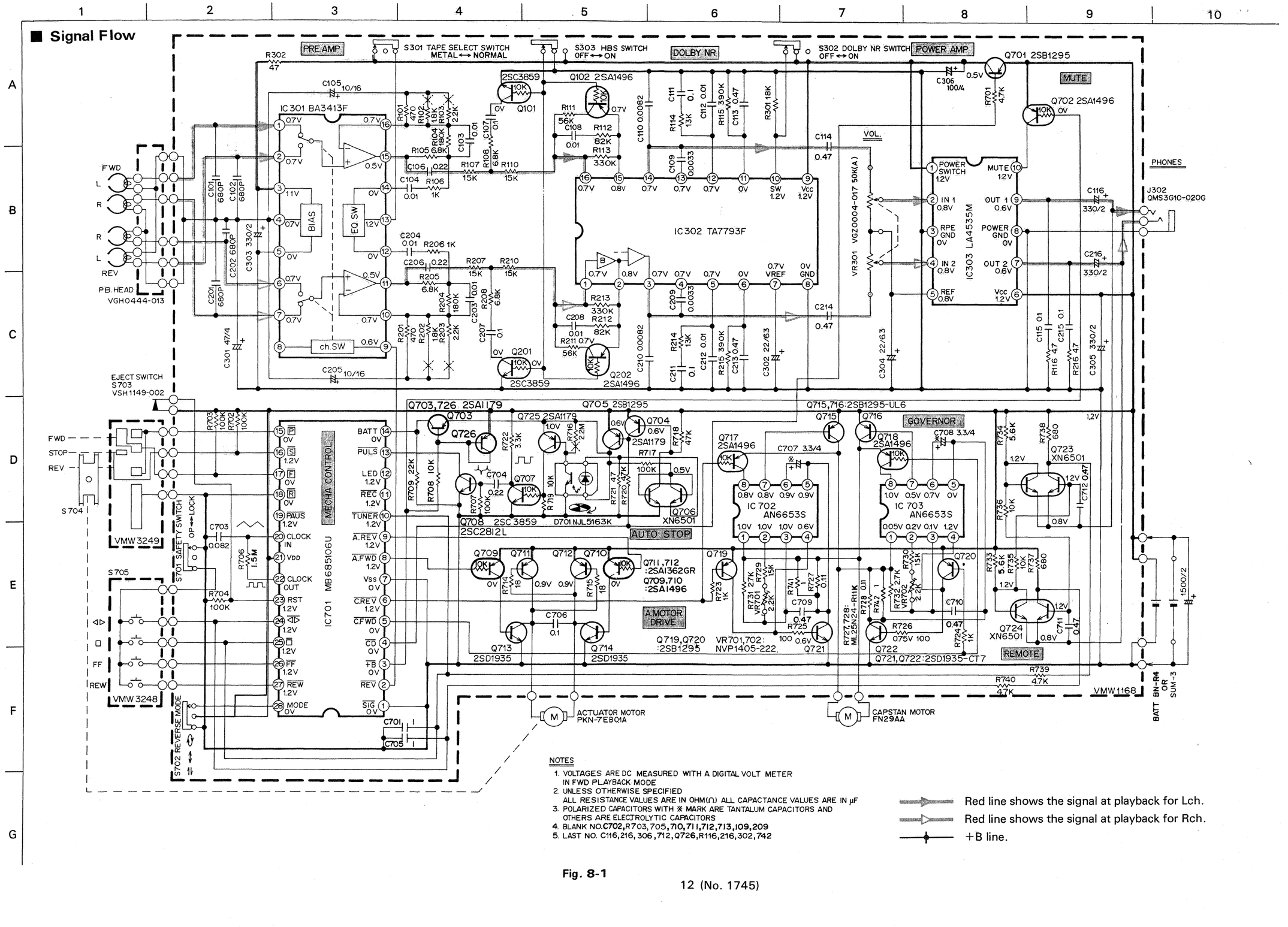


Checkup of tape guide height

Fig. 7-2(B)

8 Standard Schematic Diagrams

■ Signal Flow



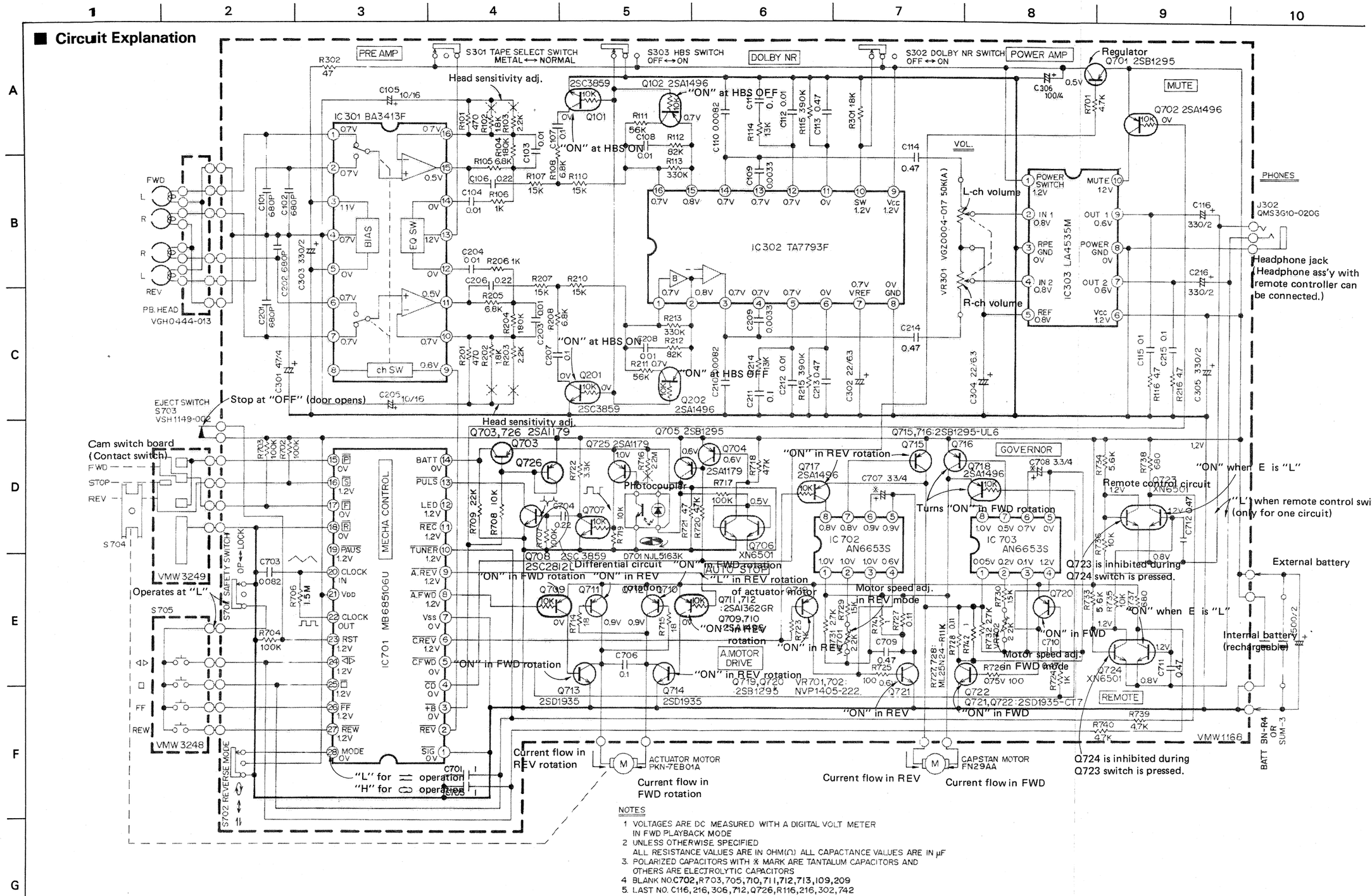
NOTES

1. VOLTAGES ARE DC MEASURED WITH A DIGITAL VOLT METER IN FWD PLAYBACK MODE
2. UNLESS OTHERWISE SPECIFIED ALL RESISTANCE VALUES ARE IN OHM(Ω) ALL CAPACTANCE VALUES ARE IN μF
3. POLARIZED CAPACITORS WITH ※ MARK ARE TANTALUM CAPACITORS AND OTHERS ARE ELECTROLYTIC CAPACITORS
4. BLANK NO.C702,R703,705,710,711,712,713,109,209
5. LAST NO. C116,216,306,712,Q726,R116,216,302,742

Red line shows the signal at playback for Lch.
Red line shows the signal at playback for Rch.
+B line.

Fig. 8-1

■ Circuit Explanation



NOTES

1. VOLTAGES ARE DC MEASURED WITH A DIGITAL VOLT METER IN FWD PLAYBACK MODE
2. UNLESS OTHERWISE SPECIFIED ALL RESISTANCE VALUES ARE IN OHM(Ω) ALL CAPACTANCE VALUES ARE IN μF
3. POLARIZED CAPACITORS WITH ※ MARK ARE TANTALUM CAPACITORS AND OTHERS ARE ELECTROLYTIC CAPACITORS
4. BLANK NO.C702,R703,705,710,711,712,713,109,209
5. LAST NO. C116,216,306,712,Q726,R116,216,302,742

Fig. 8-2

9 Location of P.C. Board Layout

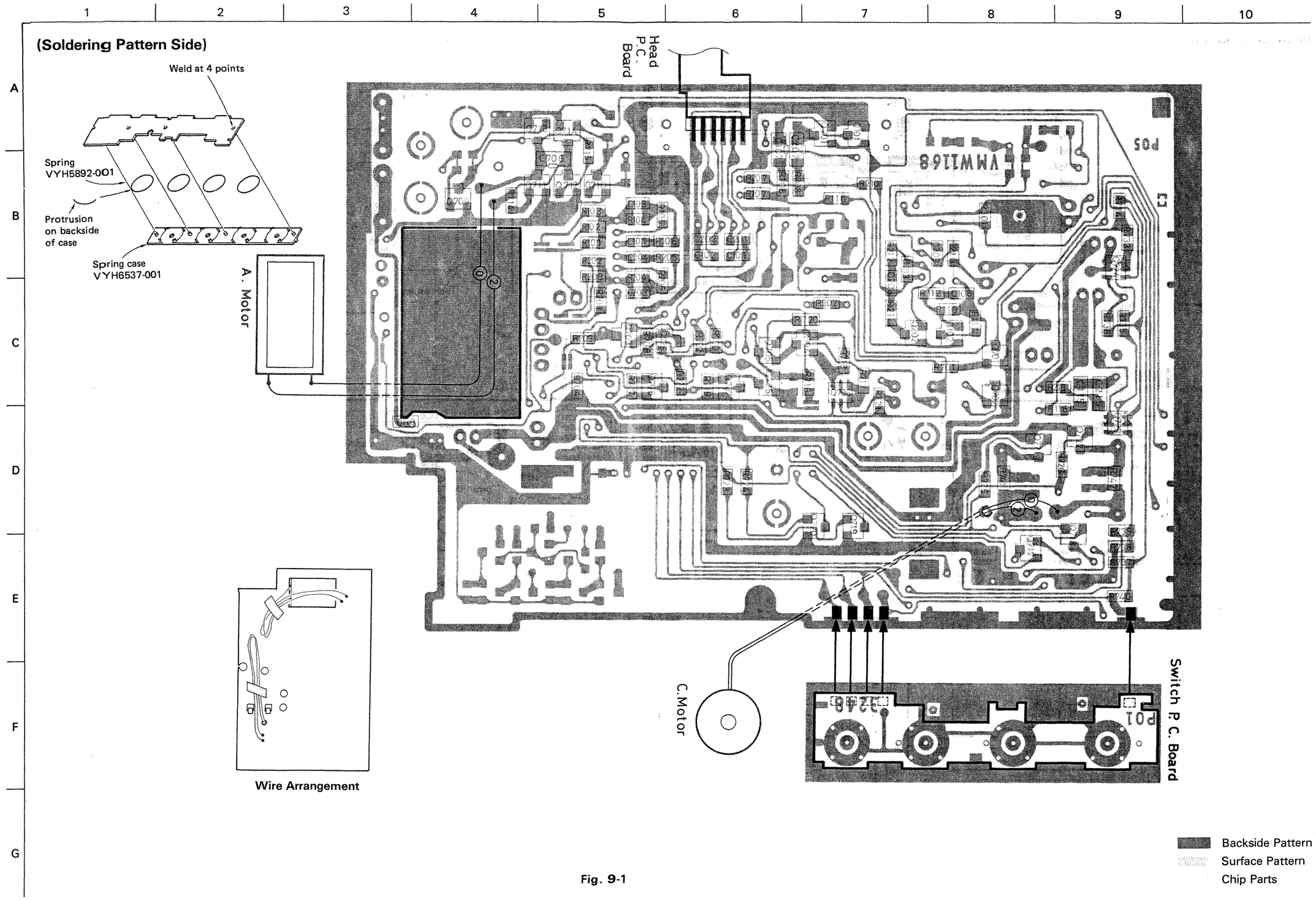
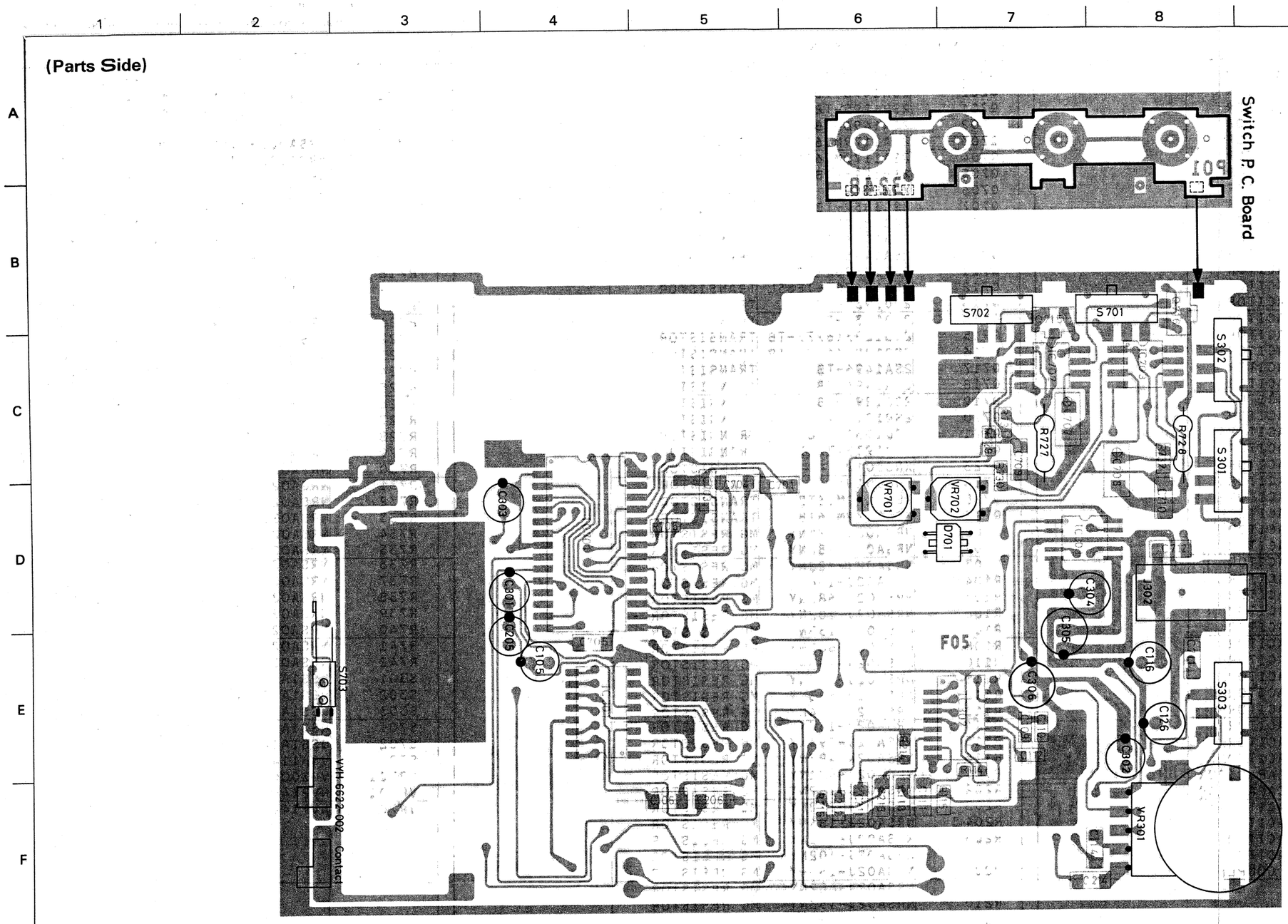


Fig. 9-1

(Parts Side)



Backside Pattern
Surface Pattern
Chip Parts

Fig. 9-2

■ P.C. Board Parts List

⚠ Parts are safety assurance parts
When replacing those parts, make sure to use the specified one.

⚠	REF NO	PARTS NO.	PARTS NAME
	C101	NCS21HJ-681AY	C CAPACITOR
	C102	NCS21HJ-681AY	C CAPACITOR
	C103	NCB21HK-103AY	C CAPACITOR
	C104	NCB21EK-103AY	C CAPACITOR
	C105	QER41CM-106VM	E CAPACITOR
	C106	QCF81EZ-224Y	C CAPACITOR
	C107	QCF81HZ-104Y	C.CAPACITOR
	C108	NCB21EK-103AY	C CAPACITOR
	C109	NCB21HK-332AY	C.CAPACITOR
	C110	NCB21EK-822AY	C.CAPACITOR
	C111	QCF81HZ-104Y	C.CAPACITOR
	C112	NCB21EK-103AY	C CAPACITOR
	C113	QCF81EZ-474YR	C CAPACITOR
	C114	QCF81EZ-474YR	C CAPACITOR
	C115	QCF81HZ-104Y	C.CAPACITOR
	C116	QER40DM-337VM	E CAPACITOR
	C201	NCS21HJ-681AY	C CAPACITOR
	C202	NCS21HJ-681AY	C CAPACITOR
	C203	NCB21HK-103AY	C CAPACITOR
	C204	NCB21EK-103AY	C CAPACITOR
	C205	QER41CM-106VM	E CAPACITOR
	C206	QCF81EZ-224Y	C CAPACITOR
	C207	QCF81HZ-104Y	C.CAPACITOR
	C208	NCB21EK-103AY	C CAPACITOR
	C209	NCB21HK-332AY	C.CAPACITOR
	C210	NCB21EK-822AY	C.CAPACITOR
	C211	QCF81HZ-104Y	C.CAPACITOR
	C212	NCB21EK-103AY	C CAPACITOR
	C213	QCF81EZ-474YR	C CAPACITOR
	C214	QCF81EZ-474YR	C CAPACITOR
	C215	QCF81HZ-104Y	C.CAPACITOR
	C216	QER40DM-337VM	E CAPACITOR
	C301	QER40GM-476VM	E CAPACITOR
	C302	QER40JM-226VM	E.CAPACITOR
	C303	QER40DM-337VM	E CAPACITOR
	C304	QER40JM-226VM	E.CAPACITOR
	C305	QER40DM-337VM	E CAPACITOR
	C306	QER40GM-107VM	E CAPACITOR
	C701	QCF81CZ-105YR	C CAPACITOR
	C703	QCY81EK-823Y	C CAPACITOR
	C704	QCF81EZ-224Y	C CAPACITOR
	C705	QCF81CZ-105YR	C CAPACITOR
	C706	QCF81HZ-104Y	C.CAPACITOR
	C707	NEF10GM-335RY	TS E CAPACITOR
	C708	NEF10GM-335RY	TS E CAPACITOR
	C709	QCF81EZ-474YR	C CAPACITOR
	C710	QCF81EZ-474YR	C CAPACITOR
	C711	QCF81EZ-474YR	C CAPACITOR
	C712	QCF81EZ-474YR	C CAPACITOR
	D701	NJL5163KF1(A,B)	PHOTO COUPLER
	IC301	BA3413F-T1	IC
	IC302	TA7793F-T1	IC
	IC303	LA4535M-T1	IC
	IC701	MB685106U	IC
	IC702	AN6653S-E1	IC
	IC703	AN6653S-E1	IC
	J302	QMS3G10-020G	JACK
	Q101	2SC3859-TB	TRANSISTOR
	Q102	2SA1496-TB	TRANSISTOR
	Q201	2SC3859-TB	TRANSISTOR
	Q202	2SA1496-TB	TRANSISTOR
	Q701	2SB1295-TB	TRANSISTOR
	Q702	2SA1496-TB	TRANSISTOR
	Q703	2SA1179M.6TB	TRANSISTOR
	Q704	2SA1179M.6TB	TRANSISTOR
	Q705	2SB1295-TB	TRANSISTOR
	Q706	XN6501W	TRANSISTOR
	Q707	2SC3859-TB	TRANSISTOR
	Q708	2SC2812L-6TB	TRANSISTOR
	Q709	2SA1496-TB	TRANSISTOR
	Q710	2SA1496-TB	TRANSISTOR
	Q711	2SA1362GR-TE85L	TRANSISTOR
	Q712	2SA1362GR-TE85L	TRANSISTOR
	Q713	2SD1935-TB	TRANSISTOR
	Q714	2SD1935-TB	TRANSISTOR
	Q715	2SB1295(6,7)-TB	TRANSISTOR
	Q716	2SB1295(6,7)-TB	TRANSISTOR
	Q717	2SA1496-TB	TRANSISTOR
	Q718	2SA1496-TB	TRANSISTOR
	Q719	2SB1295-TB	TRANSISTOR
	Q720	2SB1295-TB	TRANSISTOR
	Q721	2SD1935(7,8)-TB	TRANSISTOR
	Q722	2SD1935(7,8)-TB	TRANSISTOR
	Q723	XN6501W	TRANSISTOR
	Q724	XN6501W	TRANSISTOR
	Q725	2SA1179M.6TB	TRANSISTOR
	Q726	2SA1179M.6TB	TRANSISTOR
	R101	NRSA02J-471NY	MG RESISTOR
	R102	NRSA02J-182NY	MG RESISTOR
	R103	NRSA02J-222NY	MG RESISTOR
	R104	NRSA02J-184NY	MG RESISTOR
	R105	NRSA02J-682NY	MG RESISTOR
	R106	NRSA02J-102NY	MG RESISTOR
	R107	NRSA02J-153NY	MG RESISTOR
	R108	NRSA02J-682NY	MG RESISTOR
	R110	NRSA02J-153NY	MG RESISTOR
	R111	NRSA02J-563NY	MG RESISTOR
	R112	NRSA02J-823NY	MG RESISTOR
	R113	NRSA02J-334NY	MG RESISTOR
	R114	NRSA02J-133NY	MG RESISTOR
	R115	NRSA02J-394NY	MG RESISTOR
	R116	NRSA02K-4R7NY	MF RESISTOR
	R201	NRSA02J-471NY	MG RESISTOR
	R202	NRSA02J-182NY	MG RESISTOR
	R203	NRSA02J-222NY	MG RESISTOR
	R204	NRSA02J-184NY	MG RESISTOR
	R205	NRSA02J-682NY	MG RESISTOR
	R206	NRSA02J-102NY	MG RESISTOR
	R207	NRSA02J-153NY	MG RESISTOR
	R208	NRSA02J-682NY	MG RESISTOR
	R210	NRSA02J-153NY	MG RESISTOR
	R211	NRSA02J-563NY	MG RESISTOR
	R212	NRSA02J-823NY	MG RESISTOR
	R213	NRSA02J-334NY	MG RESISTOR
	R214	NRSA02J-133NY	MG RESISTOR
	R215	NRSA02J-394NY	MG RESISTOR
	R216	NRSA02K-4R7NY	MF RESISTOR
	R301	NRSA02J-183NY	MG RESISTOR
	R302	NRSA02J-470NY	MG RESISTOR
	R701	NRSA02J-472NY	MG RESISTOR
	R702	NRSA02J-104NY	MG RESISTOR
	R703	NRSA02J-104NY	MG RESISTOR
	R704	NRSA02J-104NY	MG RESISTOR
	R706	NRSA02J-155NY	MG RESISTOR
	R707	NRSA02J-104NY	MG RESISTOR
	R708	NRSA02J-103NY	MG RESISTOR
	R709	NRSA02J-223NY	MG RESISTOR
	R714	NRSA02J-180NY	MG RESISTOR
	R715	NRSA02J-180NY	MG RESISTOR
	R716	NRSA02J-225NY	MG RESISTOR
	R717	NRSA02J-104NY	MG RESISTOR
	R718	NRSA02J-473NY	MG REGISTOR
	R719	NRSA02J-103NY	MG RESISTOR
	R720	NRSA02J-472NY	MG RESISTOR
	R721	NRSA02J-470NY	MG RESISTOR
	R722	NRSA02J-332NY	MG RESISTOR
	R723	NRSA02J-102NY	MG RESISTOR
	R724	NRSA02J-102NY	MG RESISTOR
	R725	NRSA02J-101NY	MG RESISTOR
	R726	NRSA02J-101NY	MG RESISTOR
	R727	ML25N24-R11K	MF RESISTOR
	R728	ML25N24-R11K	MF RESISTOR
	R729	NRSA02J-152NY	MG RESISTOR
	R730	NRSA02J-152NY	MG RESISTOR
	R731	NRSA02J-272NY	MG RESISTOR
	R732	NRSA02J-272NY	MG RESISTOR
	R733	NRSA02J-562NY	MG RESISTOR
	R734	NRSA02J-562NY	MG RESISTOR
	R735	NRSA02J-103NY	MG RESISTOR
	R736	NRSA02J-103NY	MG RESISTOR
	R737	NRSA02J-681NY	MG RESISTOR
	R738	NRSA02J-681NY	MG RESISTOR
	R739	NRSA02J-472NY	MG RESISTOR
	R740	NRSA02J-472NY	MG RESISTOR
	R741	NRSA02K-1R0NY	MG RESISTOR
	R742	NRSA02K-1R0NY	MG RESISTOR
	S301	QSS1A12-V02	SLIDE SW
	S302	QSS1A12-V02	SLIDE SW
	S303	QSS1A12-V02	SLIDE SW
	S701	QSS1A12-V02	SLIDE SW
	S702	QSS1A12-V02	SLIDE SW
	S703	VSH1149-002	REEF SW
	VR301	VGZ0004-017	V,RESISTOR
	VR701	NVP1405-222	V.RESISTOR
	VR702	NVP1405-222	V.RESISTOR

10 Exploded View of Enclosure Assembly

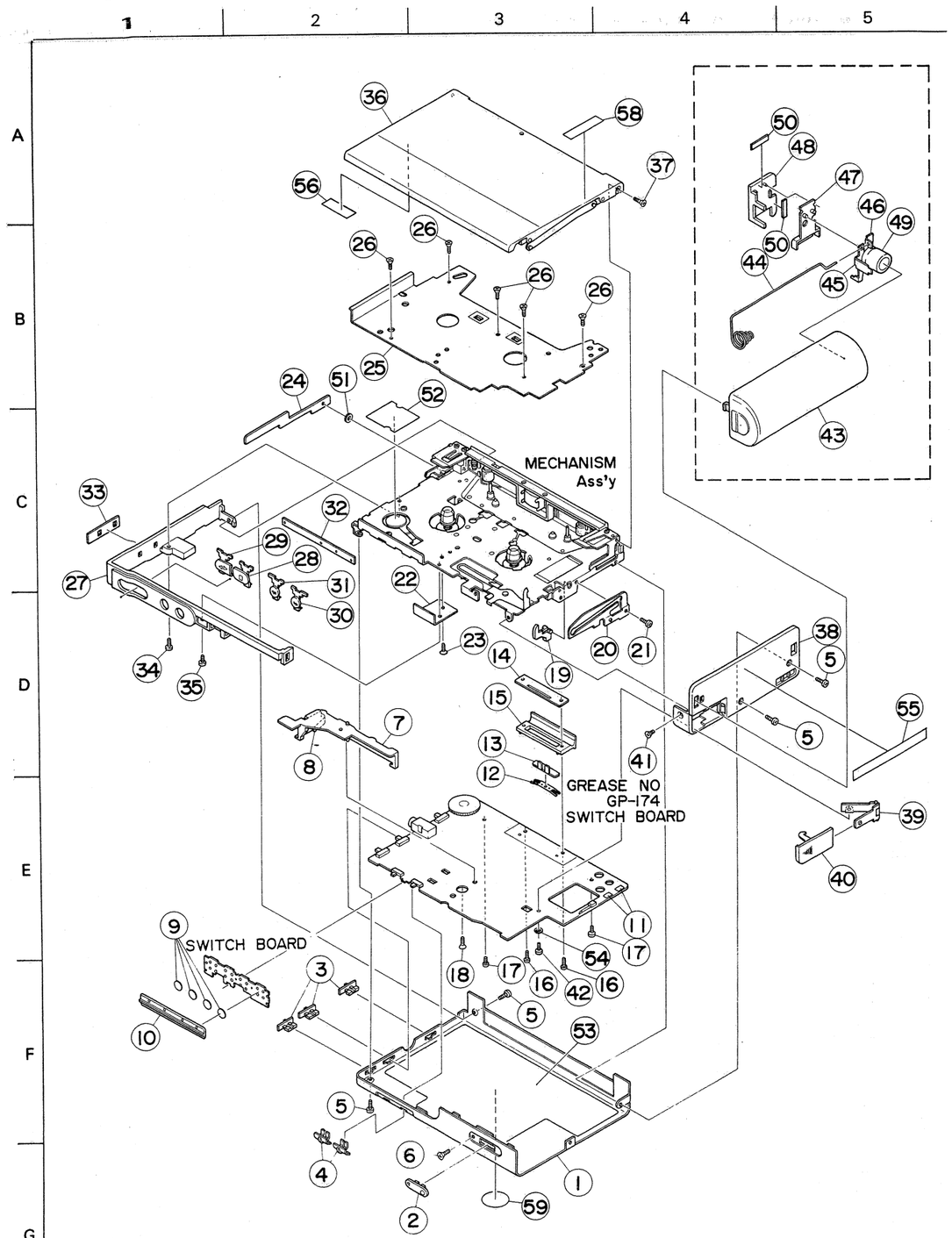


Fig. 10-1

■ Enclosure Component Parts List

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	1	VJC2309-011	BOTTOM COVER		1
	2	VXS4277-101	EJECT KNOB		1
	3	VXS4251-001	SLIDE KNOB		3
	4	VXS4271-101	SLIDE KNOB		2
	5	SPSH1425M	MINI SCREW		4
	6	SSSH1416M	MINI SCREW		1
	7	VYH3438-001	BATTERY HOLDER		1
	8	VYH6532-001	BATTERY SPRING		1
	9	VYH5892-002	SPRING		1
	10	VYH6537-001	SPRING CASE		4
	11	VYH6622-002	CONTACT		1
	12	VYH6534-001	SLIDE CONTACT		2
	13	VYH6535-001	SLIDER		1
	14	VYH6618-001	SWITCH COVER		1
	15	VYH6617-002	SWITCH CASE		1
	16	SPSH1430M	MINI SCREW		2
	17	SPSH1425N	MINI SCREW		2
	18	SSSH1416N	MINI SCREW		1
	19	VYH3461-001	LEVER		1
	20	VYH6538-001	ARM HOLDER		1
	21	SPSH1425N	MINI SCREW		1
	22	VKY4528-002	PACK SPRING		1
	23	SSSH1416N	MINI SCREW		1
	24	VJD5100-002	DIRECTION SHEET		1
	25	VJD3708-002	INNER LAY		1
	26	SSSK1420M	MINI SCREW		5
	27	VJD2315-001	FRAME		1
	28	VXP4730-001	BUTTON	STOP	1
	29	VXP4730-002	BUTTON	PLAY	1
	30	VXP4731-001	BUTTON REW		1
	31	VXP4731-002	BUTTON FF		1
	32	VYH6627-001	SHEET		1
	33	VJD5103-001	LENS		1
	34	SPSH1425N	MINI SCREW		1
	35	SSSH1416N	MINI SCREW		1
	36	VJT4147-01A	LID ASS'Y		1
	37	SPSH1425N	MINI SCREW		1
	38	VJD2317-203	SIDE PANEL		1
	39	VYH6621-00C	CONTACT ASS'Y		1
	40	VJC3139-001	BATTERY COVER		1
	41	SSSH1416N	MINI SCREW		1
	42	SPSH1425N	MINI SCREW		1
	43	VJD3703-001	BATTERY CASE		1
	44	VKW4685-001	BATTERY SPRING		1
	45	VYH6539-001	CONTACT(P)		1
	46	VYH6542-001	CONTACT(M)		1
	47	VYH6533-001	CONTACT HOLDER		1
	48	VYH6628-001	COVER		1
	49	QEU40DM-158M	E CAPACITOR		1
	50	VYSH202-007	SPACER		1
	51	Q03093-830	WASHER		1
	52	VMA4349-001	SHIELD		1
	53	VYTT511-001	SHEET		1
	54	WLS1400N	LOCK WASHER		1
	55	VYN5120-011	NAME PLATE		1
	56	VPZ4011-001	SERIAL LABEL		1
	58	31465-18	MARK	CX-9B ONLY	1
	59	VND4037-002	F.MARK	CX-9G ONLY	1
	43~51	ZCCX9-BBK	BATTERY CASE ASS'Y	BLACK TYPE	1

CX-9 A/B/C/E/G/J/U1/U2

11 Exploded View of Mechanism Assembly

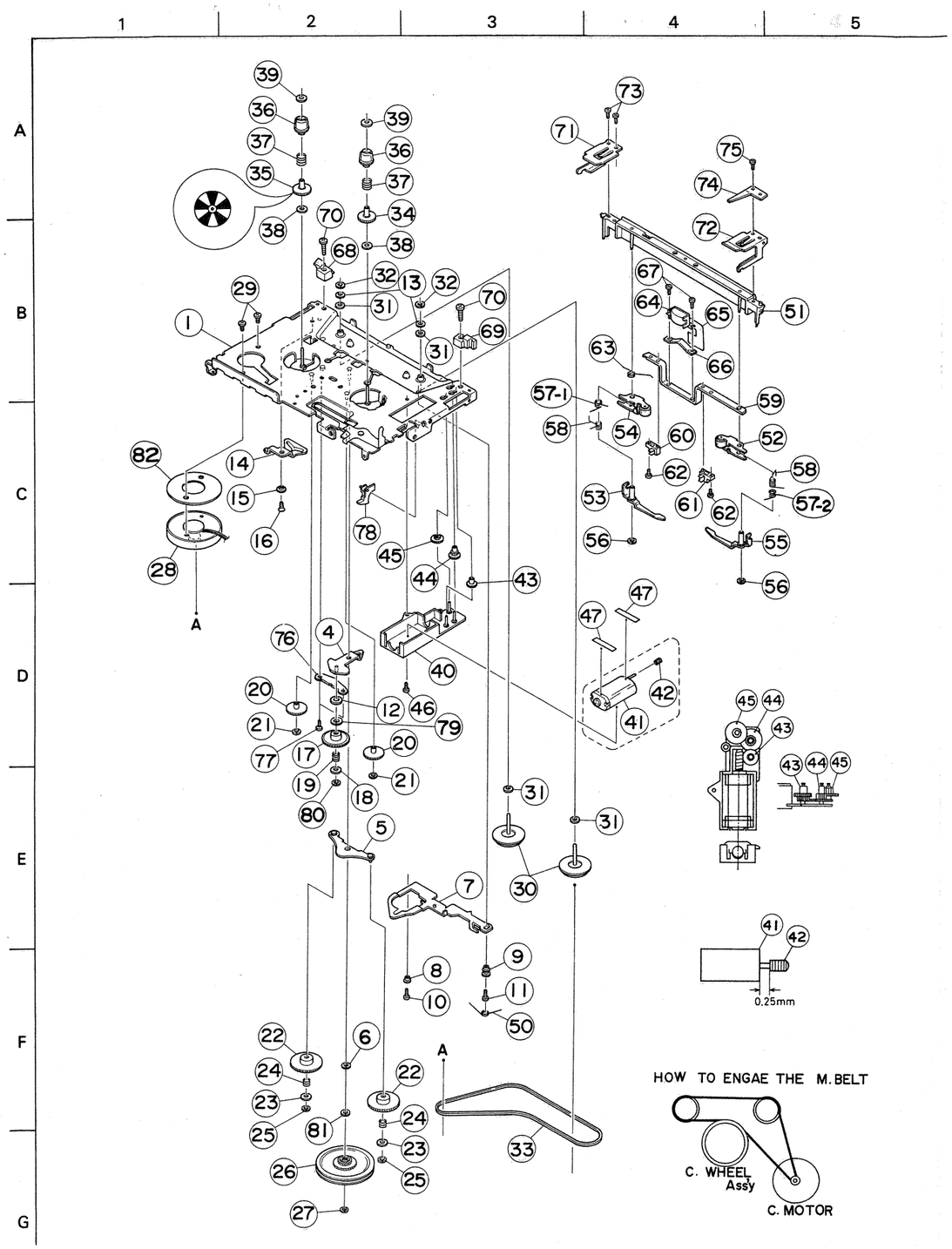


Fig. 11-1

■ Mechanism Component Parts List

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	1	VKL2336-00D	C. BASE ASS'Y		1
	4	VKL6240-00B	PLAY ARM ASS'Y		1
	5	VKL6242-00B	FR ARM ASS'Y		1
	6	WDM123525	SLIT WASHER		1
	7	VKL3927-00C	SELECTOR ASS'Y		1
	8	VKH3001-076	FLANGE COLLAR		1
	9	VKH5039-001	COLLAR		1
	10	SPSK1420M	MINI SCREW		1
	11	SPSK1435M	MINI SCREW		1
	12	WFM266013	WASHER		1
	13	Q03093-848	WASHER		2
	14	VKL6244-002	MODE LEVER		1
	15	VKH3013-038	FLANGE COLLAR		1
	16	SSSK1420M	MINI SCREW		1
	17	VKS5015-002	PLAY GEAR (1)		1
	18	WFM123525	WASHER		1
	19	VKW3001-222	C.SPRING		1
	20	VKS5016-002	PLAY GEAR (2)		2
	21	WDM083025	SLIT WASHER		2
	22	VKS5017-002	FR GEAR		2
	23	WFM175013	WASHER		2
	24	VKW3001-216	C.SPRING		2
	25	WDM123525	SLIT WASHER		2
	26	VKS3316-00C	C. WHEEL ASS'Y		1
	27	WFM163013	WASHER		1
	28	FN29AA	C. MOTOR ASS'Y		1
	29	SPSK1714M	MINI SCREW		2
	30	VKF4184-00B	FLYWHEEL ASS'Y		2
	31	VKZ4473-001	WASHER		4
	32	VKZ4435-001	SLIT WASHER		2
	33	VKB3000-117	BELT		1
	34	VKR4482-003	REEL GEAR		1
	35	VKR4502-00C	REEL GEAR ASS'Y		1
	36	VKR3133-004	REEL FEATHER		2
	37	VKW3001-218	C.SPRING		2
	38	Q03093-839	WASHER		2
	39	WDM123525	SLIT WASHER		2
	40	VKS5021-00A	A. BOX ASS'Y		1
	41	PKN-7EC01A	ACTUATOR MOTOR		1
	42	VKS5022-002	A. MOTOR GEAR		1
	43	VKS5023-002	A. GEAR(1)		1
	44	VKS5024-002	A. GEAR(2)		1
	45	VKS5025-002	A. GEAR(3)		1
	46	SPSH1420M	MINI SCREW		1
	47	VYSA1R3-008	SPACER		2
	50	VKW4732-001	TORSION SP		1
	51	VKZ3139-00E	MAIN BASE ASS'Y		1
	52	VKP4186-00A	P.R. ASS'Y		1
	53	VKL6245-00A	PR.LEVER ASY(R)		1
	54	VKP4186-00A	P.R. ASS'Y		1
	55	VKL6247-00A	PR.LEVER ASS'Y	LEFT	1
	56	WDL122525-4	SLIT WASHER		2
	57-1	VKW3006-171	TORSION SPRING		1
	57-2	VKW3006-185	TORSION SPRING		1
	58	VKW4698-001	LEVER SPRING		2
	59	VKZ2111-001	HEAD LEVER		1
	60	VKS3318-003	TAPE GUIDE(R)		1
	61	VKS3319-004	TAPE GUIDE(L)		1
	62	SPSH1450M	MINI SCREW		2
	63	VKW4697-003	HEAD LEVER SP		1

⚠ Parts are safety assurance parts
When replacing those parts, make sure to use the specified one.

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	64	VGH0444-014	P.B.HEAD ASS'Y		1
	65	VMW3250-001	PW BOARD		1
	66	VKY4527-002	AZIMUTH SPRING		1
	67	SPSK1425M	MINI SCREW		2
	68	VKZ4417-002	BASE HOLDER(R)		1
	69	VKZ4418-002	BASE HOLDER(L)		1
	70	SPSH1755M	MINI SCREW		2
	71	VKL6249-002	C. HOLDER(R)		1
	72	VKL6250-001	C. HOLDER(L)		1
	73	SPSK1420M	MINI SCREW		2
	74	VKY4529-003	PRESSURE SPRING		1
	75	SPSK1420M	MINI SCREW		1
	76	VKL6419-001	P.ARM STOPPER		1
	77	SPSK1414M	MINI SCREW		1
	78	VYH3461-001	LEVER		
	79	VKZ4003-010	FELT		1
	80	WDL082025-4	SLIT WASHER		1
	81	WDM123513	SLIT WASHER		1
	82	VYTT506-001	SPACER		1

12 Accessories

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	Parts No.	Parts Name	Remarks	Q'ty
	VNN5120-611	Instruction Book	CX-9C/J	1
	" -111	"	CX-9A/U1/U2	1
	" -211	"	CX-9B/E/G	1
	BT20047C	Warranty Card	CX-9J/U1/U2	1
	BT20027D	"	CX-9A	1
	BT20060	"	CX-9B	1
	BT20025J	"	CX-9C	1
	BT20065	"	CX-9G	1
	BT20046C	Special Reply Card	CX-9J/U1/U2	1
	BT20098	Warranty Card	CX-9A	1
	BT20066	"	CX-9B/G	1
	BT20071A	SCV Center List	CX-9C	1
	VNC5311-204	Caution Card	CX-9U1/U2	1
	" -203	"	CX-9U1/U2	1
	VJY4027-001	Headphones		1
	VGB0015-102	Charger	AC-R15J [CX-9J (120 V)]	1
	" -108	"	AC-R15A [CX-9A (240 V)]	1
	" -106BS	"	AC-R15B [CX-9B (240 V)]	1
	" -107	"	AC-R15E [CX-9E/G (220 V)]	1
	" -104	"	AC-R15U1 [CX-9U1 (120 V)]	1
	" -105	"	AC-R15U2 [CX-9U2 (220 V)]	1
	" -103	"	AC-R15C [CX-9C (120 V)]	1
	VGZ0064-001	Battery	BN-R4 Rechargeable	1
	VGZ0066-00A	Battery Ass'y	BN-R4 Rechargeable (E version only)	1
	VJB3024-001	Soft Case		1
	V04062-003	Conti Plug	CX-9U2	1

13 Packing

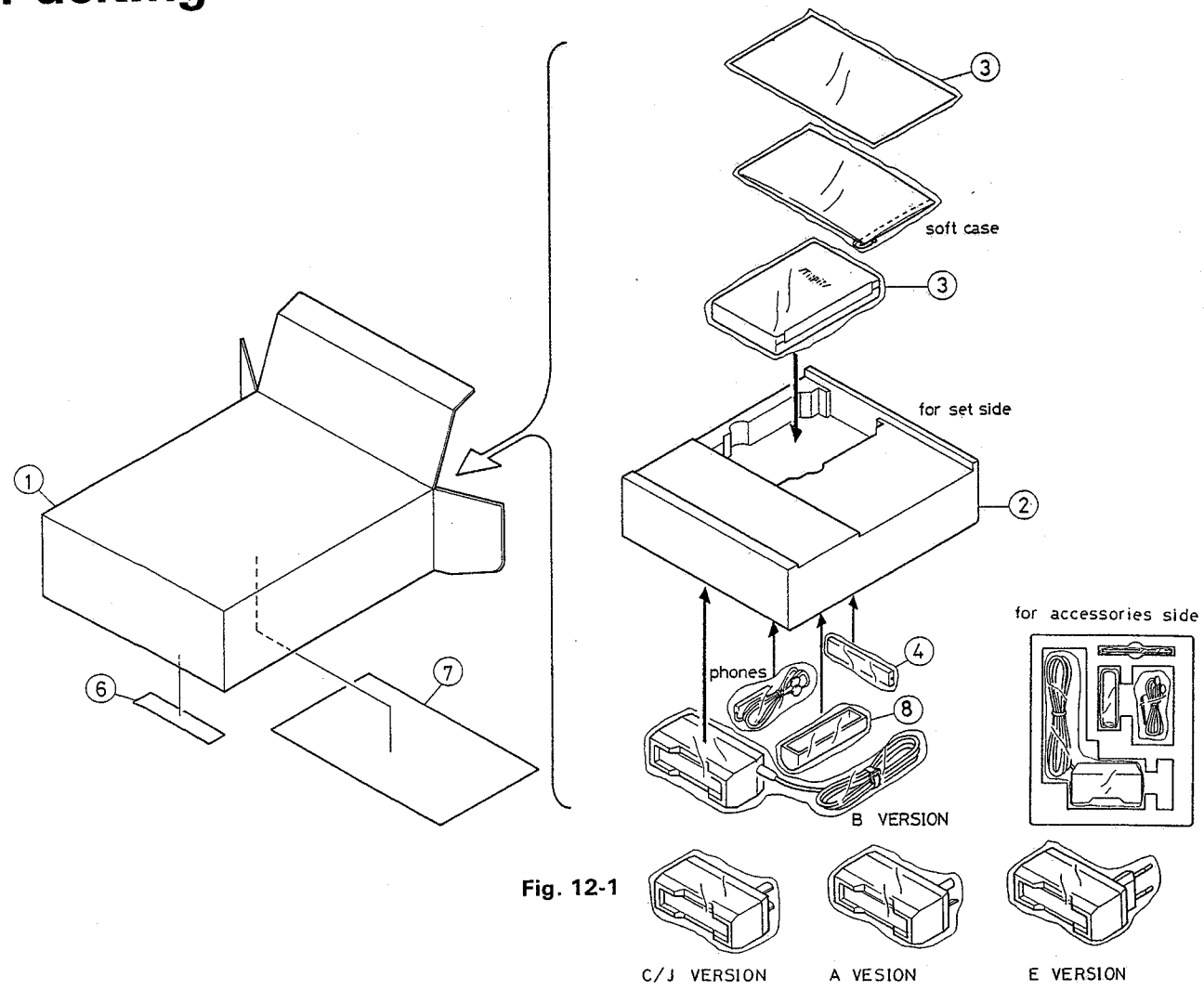


Fig. 12-1

■ Packing Parts List

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

⚠	Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	1	VPC5120-011	Carton Box	CX-9C/J/U1	1
	1	VPC5120-021	Carton Box	CX-9A/B/E/G/U2	1
	2	VPH2346-001	Cushion	CX-9C/J/U1	1
		VPH2355-001	Cushion	CX-9A/B	1
		VPH2356-001	Cushion	CX-9E/G/U2	1
	3	QPGA012-02505	Poly Bag	for Unit/Instraction Book	2
	4	QPGA008-01205	Poly Bag	for Battery	1
	5	VPK4226-001	Spacer	Heed Protector	1
	6	VNC5003-005	Serial Label		1
	7	E66416-003	Envelope	for Warranty	1
	8	QPGA008-01503	Poly Bag	for Battery Case	1

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